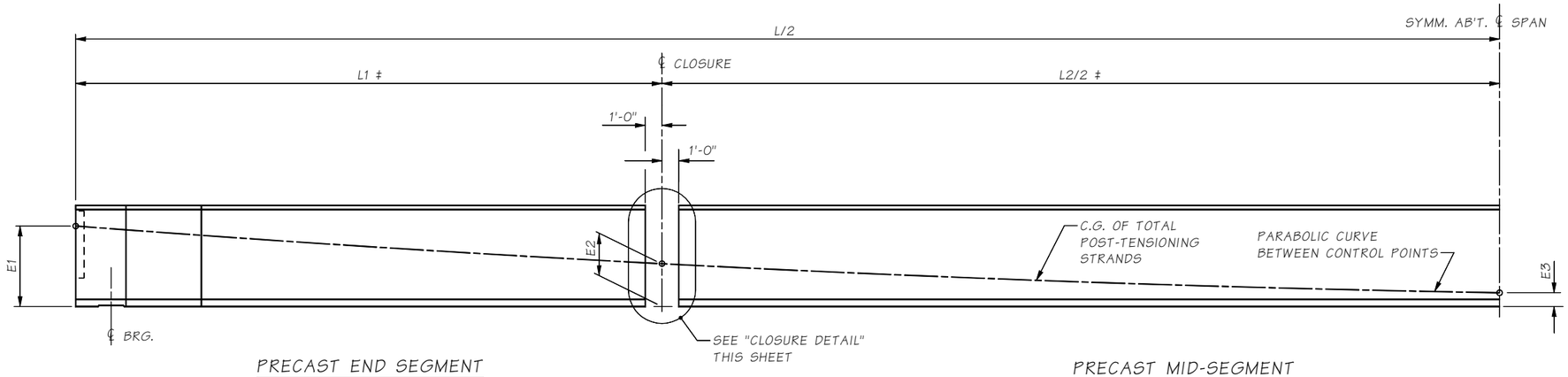
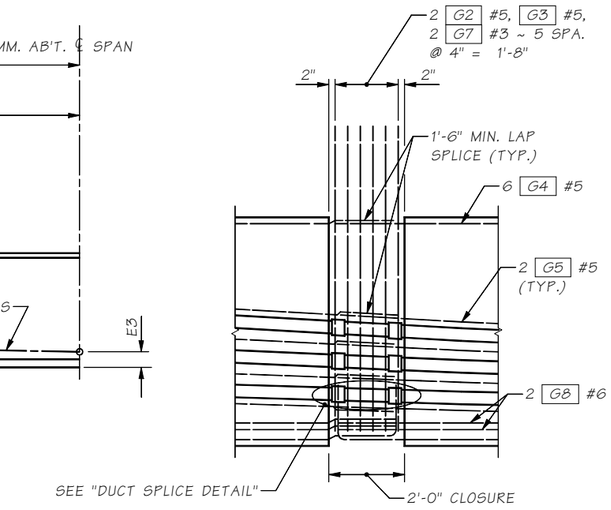


PRECAST END SEGMENT

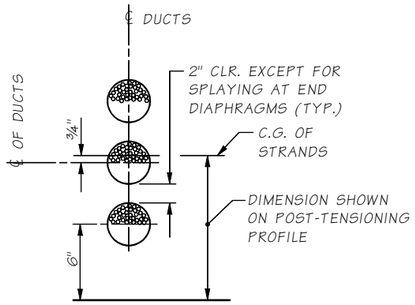
PRECAST MID-SEGMENT

PRECAST LONGITUDINAL HALF-SECTION

SHOWING POST-TENSIONING CABLE PATHS
± MEASURED BEFORE POST-TENSIONING.

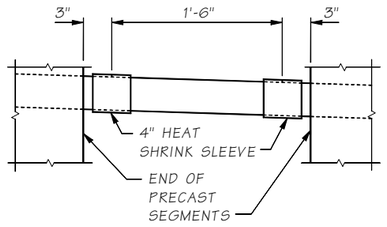


CLOSURE DETAIL

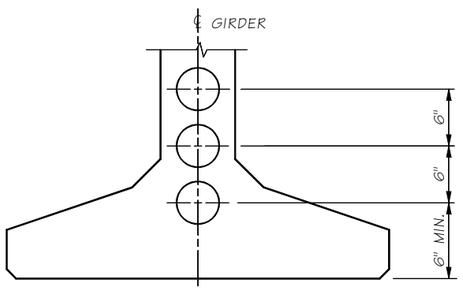


TENDON IN SAG CURVE

STRAND LOCATION DETAIL



DUCT SPLICE DETAIL



POST-TENSIONING STRAND PATTERN AT ℄ SPAN

POST-TENSIONING TABLE

SPAN	GIRDER	MIN. CONC. COMPRESSIVE STRENGTH (KSI)		NUMBER OF STRANDS	PRESTRESSING LOAD (KIPS)		TOTAL PRESTRESS LOSS (KSI)	E1 (IN.)	E2 (IN.)	E3 (IN.)	TEMPORARY STRANDS	
		GIRDER	CLOSURE		JACKING	AFTER SEATING					NUMBER OF STRANDS	JACKING FORCE (KIPS)

POST-TENSIONING NOTES

1. THE MINIMUM COMPRESSIVE STRENGTH OF THE CAST-IN-PLACE CONCRETE AT THE CLOSURE AT THE TIME OF POST-TENSIONING SHALL BE AS SHOWN IN POST-TENSIONING TABLE.
2. THE MAXIMUM OUTSIDE DIAMETER OF THE DUCT SHALL BE ??? INCHES. THE AREA OF THE DUCT SHALL BE AT LEAST 2.5 TIMES THE NET AREA OF THE PRESTRESSING STEEL IN THE DUCT.
3. THE DESIGN IS BASED ON [½"ø OR 0.6"ø] LOW RELAXATION STRANDS WITH AN ANCHOR SET OF ⅜", A CURVATURE FRICTION COEFFICIENT, μ = 0.20 AND A WOBBLE FRICTION COEFFICIENT, k = 0.0002/FT. THE ACTUAL ANCHOR SET AND JACKING FORCE USED BY THE CONTRACTOR SHALL BE SPECIFIED IN THE SHOP PLANS AND INCLUDED IN THE TRANSFER FORCE CALCULATIONS.
4. THE DESIGN IS BASED ON THE ESTIMATED PRESTRESS LOSS OF POST-TENSIONING STRANDS SHOWN IN THE POST-TENSIONING TABLE DUE TO STEEL RELAXATION, ELASTIC SHORTENING CREEP AND SHRINKAGE OF CONCRETE.
5. THE CONTRACTOR SHALL SUBMIT THE STRESSING SEQUENCE AND ELONGATION CALCULATIONS TO THE ENGINEER FOR APPROVAL. ALL LOSSES DUE TO TENDON VERTICAL AND HORIZONTAL CURVATURE MUST BE INCLUDED IN ELONGATION CALCULATIONS. THE STRESSING SEQUENCE SHALL MEET THE FOLLOWING CRITERIA:
   A. THE PRESTRESSING FORCE SHALL BE DISTRIBUTED WITH AN APPROXIMATELY EQUAL AMOUNT IN EACH WEB AND SHALL BE PLACED SYMMETRICALLY ABOUT THE CENTERLINE OF THE BRIDGE.
   B. NO MORE THAN ONE-HALF OF THE PRESTRESSING FORCE IN ANY WEB MAY BE STRESSED BEFORE AN EQUAL FORCE IS STRESSED IN THE ADJACENT WEBS. AT NO TIME DURING STRESSING OPERATION WILL MORE THAN 1/6 OF THE TOTAL PRESTRESSING FORCE IS APPLIED ECCENTRICALLY ABOUT THE CENTERLINE OF THE BRIDGE.
6. ALL TENDONS SHALL BE STRESSED FROM ONE END.
7. TEMPORARY STRANDS SHALL BE POST-TENSIONED IN ACCORDANCE WITH SECTION 6-02.3(25)L OF THE STANDARD SPECIFICATIONS. TEMPORARY STRANDS MAY BE POST-TENSIONED ON THE SAME DAY THE PRETENSIONING IS RELEASED INTO THE GIRDER.

Bridge Design Engr.	M:\Standards\Girders\PT Wide Flange\WF74PTG1.MAN				REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor					10	WASH.			
Designed By					JOB NUMBER				
Checked By									
Detailed By									
Bridge Projects Engr.									
Prelim. Plan By									
Architect/Specialist	DATE	REVISION	BY	APP'D					

BRIDGE AND STRUCTURES OFFICE

Washington State Department of Transportation

STANDARD PRESTRESSED CONCRETE GIRDERS

WF74PTG SPLICED GIRDER
DETAILS 1 OF 5

BRIDGE SHEET NO.

SHEET OF SHEETS

SR JOB NO. SHEET

5.9-A1-3

Tue Apr 29 13:46:45 2008